David An

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Education

2021 – 2023	**University of Illinois Urbana-Champaign** – Champaign, IL B.Sc in Mathematics – *GPA: 3.91/4.00*
2018 – 2020	**Westmoreland County Community College** – Youngwood, PA A.A.S in Computer Science

Research experience

January 2022 – Present	**Illinois Risk Lab** Mentors: Linfeng Zheng, Zhiyu (Frank) Quan Society of Actuaries (SOA) funded project to develop a natural language powered repository for cyber-risk and cybsersecurity related articles. Designed a custom indexing and query generation system based on the corpus domain to increase search efficiency.
January 2022 – Feburary 2022	**Academic Literature Text Mining Research** Mentors: Dr. Emiliano Valdez (University of Connecticut). Scraped scientific documents for keyword and trend analysis. Created different programs to enable efficient querying and retrieval of online databases as well as automated text mining processes and data cleaning.

Industry experience

May 2022 – Present	**Ameren (Data Scientist Intern)** – Champaign, IL Developed SARIMAX forecasting methods for gas usage in Missouri as well as performed feature pruning and selection. Benchmarked load disaggregation algorithms against the REDD dataset using load monitoring techniques. Designed SQL queries to allow retrieval of over 150,000 customer records.
October 2021 – May 2022	**American Supply Association (Business Analyst)** – Champaign, IL Developed evaluations for best inventory management software practices for plumbing and HVAC contractors. Studied distributor and contractor behavior and relationships in the plumbing industry and reached out to industry members to understand current supply chain issues.

Talks and presentations

August 2022	Designing a Natural Language Processing Powered Search Repository **D. An**, L. Zheng, Z. Quan *57th Actuarial Research Conference*
August 2022	Building Community in Virtual Open-Source Learning M. Para, **D. An**, S. Chittal, H. Deep *Illinois Computer Science Summer Teaching Workshop (iCSTW 2022)*
July 2022	Lessons in Flexible Supply Chain Design **D. An** *Ameren Digital Webinar Series*
May 2022	Designing a Natural Language Processing Powered Search Repository **D. An**, L. Zheng, Z. Quan *Illinois Risk Lab Seminar*

Mentorship and service

May 2022 – August 2022	**Summer of Side Projects (Program Manager)** Summer of Side Projects 2022 is an entirely student-led initative dedicated to teaching other students how to build side projects. This 4-week series had sessions covering different project topics to career advice and guidance. In all, the program attracted 400+ students and had over 100+ project submissions.
August 2021 – January 2022	**Illini Electric Vehicle Concept (Embedded Systems Developer)** Designed a CAN interface to send and recieve CAN packets using the MCP2515 Chip and Arduinos using C++ and Reformed the current CAN bus protocol to increase communication efficiency between different subsystems.

Honors and scholarships

2022	Most Outstanding Undergraduate Intern (University of Illinois Research Park)
2021 – Present	Dean's List (University of Illinois)

Technical skills

Programming: C++, Java, Python, Wolfram, SQL, LaTeX, Arduino, R

Tools: AWS, Git, TeraData, RStudio, Wolfram Mathematica

Skills: Text mining, Web scraping, Data visualization, Natural language processing